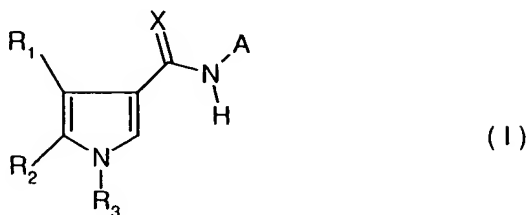


What is claimed is

1. A pyrrolecarboxamide or pyrrolethioamide of the formula I



wherein

X is oxygen or sulfur;

R₁ is C₁-C₄alkyl unsubstituted or substituted, with the exception of CF₃; C₃-C₆cycloalkyl unsubstituted or substituted; or halogen;

R₂ is hydrogen, C₁-C₄alkyl unsubstituted or substituted, C₁-C₄alkoxy unsubstituted or substituted, cyano or halogen;

R₃ is C₁-C₄alkyl unsubstituted or substituted; and

A is orthosubstituted aryl; orthosubstituted heteroaryl; bicycloaryl unsubstituted or substituted; or bicycloheteroaryl unsubstituted or substituted.

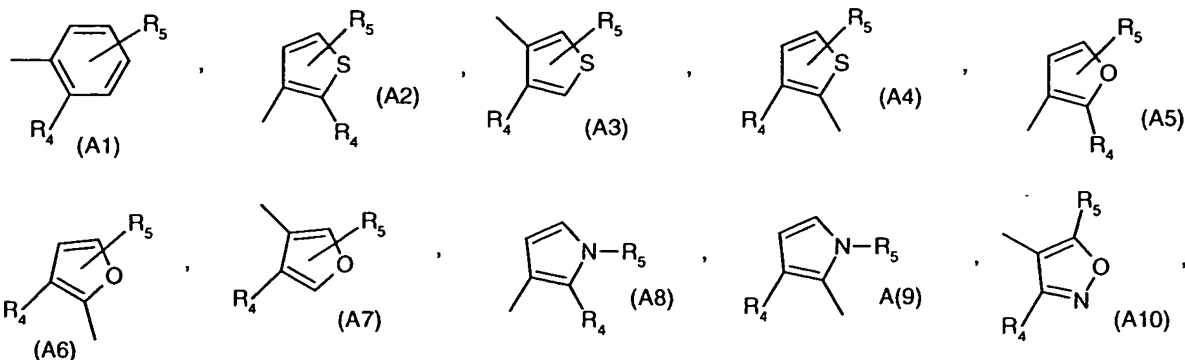
2. A compound of formula I according to claim 1, wherein

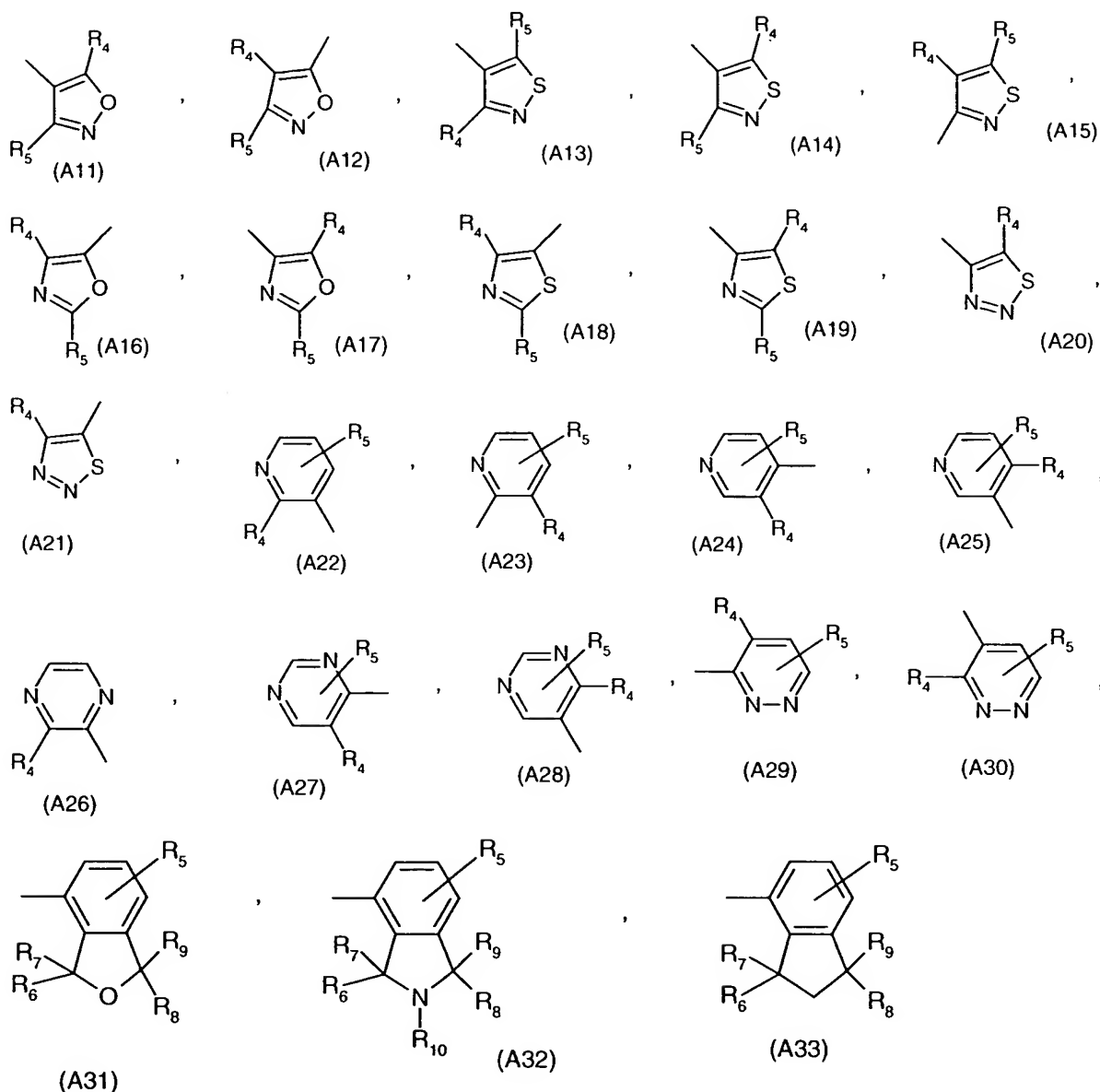
R₁ is C₁-C₄alkyl; C₁-C₄haloalkyl; C₁-C₄alkoxy-C₁-C₄alkyl; C₁-C₄haloalkoxy-C₁-C₄alkyl; C₃-C₆cycloalkyl unsubstituted or substituted by C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄alkoxy, C₁-C₄haloalkoxy, C₁-C₄alkoxy-C₁-C₄alkyl, C₁-C₄haloalkoxy-C₁-C₄alkyl or halogen; or halogen;

R₂ is hydrogen, C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄alkoxy, C₁-C₄haloalkoxy, C₁-C₄alkoxy-C₁-C₄alkyl, C₁-C₄haloalkoxy-C₁-C₄alkyl, cyano or halogen;

R₃ is C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄alkoxy-C₁-C₄alkyl or C₁-C₄haloalkoxy-C₁-C₄alkyl;

A is a group





and

R_4 is C_3 - C_7 cycloalkyl, C_4 - C_7 cycloalkenyl, C_5 - C_7 cycloalkadienyl wherein the cycloalkyl group can be mono- to pentasubstituted by halogen, hydroxy, C_1 - C_4 alkyl, C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy, C_2 - C_4 alkenyl, C_2 - C_5 alkynyl, C_1 - C_4 haloalkyl; phenyl unsubstituted or substituted by halogen, nitro, cyano, CHO, C_1 - C_4 alkyl, C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy, C_2 - C_5 alkenyl, C_2 - C_5 alkynyl, C_1 - C_4 haloalkyl, COOC $_1$ - C_4 alkyl, C_1 - C_4 alkoxy- C_1 - C_4 alkyl, C_1 - C_4 alkyl- C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy- C_1 - C_4 alkyl, C_1 - C_4 haloalkyl- C_1 - C_4 alkoxy; thienyl, furyl, pyrrolyl, pyrazolyl, oxazolyl, thiazolyl, isoxazolyl, isothiazolyl, thiadiazolyl, imidazolyl, triazinyl, pyridyl, pyrazinyl, pyridazinyl or pyrimidinyl which are unsubstituted or substituted by halogen, C_1 - C_6 haloalkyl, C_1 - C_6 alkyl, C_2 - C_5 alkenyl, C_2 - C_5 alkynyl, nitro, cyano, hydroxy, CHO, C_1 - C_6 alkoxy, COOC $_1$ - C_6 alkyl, C_1 - C_4 alkoxy- C_1 - C_4 alkyl, C_1 - C_4 haloalkoxy- C_1 - C_4 alkyl or

C₁-C₆haloalkoxy;

R₅ is hydrogen, cyano, nitro, halogen, C₁-C₄haloalkyl, C₁-C₄alkyl, C₁-C₄alkoxy-C₁-C₄alkyl, C₁-C₄haloalkoxy-C₁-C₄alkyl, C₁-C₄alkoxy or C₁-C₄haloalkoxy;

R₆, R₇, R₈, R₉ and R₁₀ are identical or different and are each independently of the others hydrogen, halogen, C₁-C₄haloalkyl, C₁-C₄alkyl, C₂-C₅alkenyl, C₂-C₅alkynyl, C₁-C₄alkoxy, C₁-C₄alkoxy-C₁-C₄alkyl, C₁-C₆haloalkoxy-C₁-C₄alkyl, C₁-C₄haloalkoxy or C₃-C₇cycloalkyl.

3. A compound of formula I according to claim 2, wherein

X is oxygen.

4. A compound of formula I according to claim 2, wherein

X is sulfur.

5. A compound of formula I according to claim 3, wherein

R₁ is C₁-C₃alkyl; C₁-C₃haloalkyl; C₃-C₆cycloalkyl unsubstituted or substituted by C₁-C₃alkyl, C₁-C₃haloalkyl or halogen;

R₂ is hydrogen, C₁-C₄alkyl or C₁-C₄haloalkyl;

R₃ is C₁-C₄alkyl, C₁-C₃haloalkyl or C₁-C₃alkoxy-C₁-C₃alkyl;

A is A1, A2, A3, A5, A8, A10, A13, A14, A17, A18, A20, A21, A22, A24, A25, A26, A27, A29, A31 or A32;

R₄ is C₅-C₇cycloalkyl, unsubstituted or mono- to trisubstituted by halogen, hydroxy, C₂-C₄alkenyl, C₂-C₄alkynyl, C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄haloalkoxy or C₁-C₄alkoxy;

C₅-C₇cycloalkenyl, unsubstituted or mono- to trisubstituted by halogen, hydroxy, C₂-C₄alkenyl, C₂-C₄alkynyl, C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄haloalkoxy or C₁-C₄alkoxy; C₅-C₇cyclodialkenyl, unsubstituted or mono- to disubstituted by halogen, hydroxy, C₂-C₄alkenyl, C₂-C₄alkynyl,

C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄haloalkoxy or C₁-C₄alkoxy; thienyl, furyl, isoxazolyl, oxazolyl, thiadiazolyl, triazinyl, pyridyl, pyrimidinyl, pyrazinyl or pyridazinyl, which are unsubstituted or substituted by halogen, hydroxy, C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄alkoxy or C₁-C₄haloalkoxy; phenyl which is unsubstituted or substituted by halogen, C₁-C₄alkyl, C₁-C₄alkoxy, C₁-C₄haloalkyl or C₁-C₄haloalkoxy;

R₅ is hydrogen, halogen, C₁-C₄alkyl, C₁-C₄alkoxy, C₁-C₄haloalkyl or C₁-C₄haloalkoxy; and

R₆, R₇, R₈, R₉ and R₁₀ are identical or different and are each independently of the others hydrogen, C₁-C₄alkyl, C₁-C₄alkoxy, C₁-C₄haloalkyl or C₁-C₄haloalkoxy.

6. A compound of formula I according to claim 5, wherein

A is A1, A2, A3, A17, A20, A21, A24, A25, A26, A27 or A31;

R₁ is C₁-C₂alkyl, C₁-C₃haloalkyl or cyclopropyl;

R₂ is hydrogen or C₁-C₃alkyl;

R₃ is C₁-C₃alkyl or C₁-C₃alkoxy-C₁-C₃alkyl;

R₄ is cyclohexyl, cyclohexenyl or cyclohexadienyl, which are unsubstituted or mono- to disubstituted by chloro, bromo, C₁-C₂alkyl, C₁-C₂haloalkyl or C₁-C₂haloalkoxy; thienyl, furyl, triazinyl, pyridyl, pyrazinyl, pyridazinyl or pyrimidinyl which are unsubstituted or substituted by halogen, C₁-C₄alkyl, C₁-C₄haloalkyl or C₁-C₄haloalkoxy;

R₅ is hydrogen, halogen, C₁-C₃alkyl, C₁-C₃haloalkyl, C₁-C₃alkoxy or C₁-C₃haloalkoxy; and

R₆, R₇, R₈, R₉ and R₁₀ are identical or different and are each independently of the others hydrogen or C₁-C₃alkyl.

7. A compound of formula I according to claim 6, wherein

R₁ is methyl, ethyl, CFH₂ or CF₂H;

R₂ is hydrogen;

R₃ is methyl or CH₂OCH₃;

A is A31 or A33; and

R₄ is halophenyl, C₅-C₇cycloalkyl or halothienyl.

8. A compound of formula I according to claim 4, wherein

R₁ is C₁-C₃alkyl; C₁-C₃haloalkyl; C₃-C₆cycloalkyl unsubstituted or substituted by C₁-C₃alkyl, C₁-C₃haloalkyl or halogen;

R₂ is hydrogen, C₁-C₄alkyl or C₁-C₄haloalkyl;

R₃ is C₁-C₄alkyl, C₁-C₃haloalkyl or C₁-C₃alkoxy-C₁-C₃alkyl;

A is A1, A2, A3, A5, A8, A10, A13, A14, A17, A18, A20, A21, A22, A24, A25, A26, A27, A29, A31 or A32;

R₄ is C₅-C₇cycloalkyl, unsubstituted or mono- to trisubstituted by halogen, hydroxy, C₂-C₄alkenyl, C₂-C₄alkynyl, C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄haloalkoxy or C₁-C₄alkoxy; C₅-C₇cycloalkenyl, unsubstituted or mono- to trisubstituted by halogen, hydroxy, C₂-C₄alkenyl, C₂-C₄alkynyl, C₁-C₄alkyl, C₁-C₄haloalkoxy, C₁-C₄haloalkoxy or C₁-C₄alkoxy; C₅-C₇cyclodialkenyl, unsubstituted or mono- to disubstituted by halogen, hydroxy,

C₂-C₄alkenyl, C₂-C₄alkynyl, C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄haloalkoxy or C₁-C₄alkoxy; thienyl, furyl, isoxazolyl, oxazolyl, thiadiazolyl, triazinyl, pyridyl, pyrimidinyl, pyrazinyl or pyridazinyl, which are unsubstituted or substituted by halogen, hydroxy, C₁-C₄alkyl, C₁-C₄haloalkyl, C₁-C₄alkoxy or C₁-C₄haloalkoxy; phenyl which is unsubstituted or substituted by halogen, C₁-C₄alkyl, C₁-C₄alkoxy, C₁-C₄haloalkyl or C₁-C₄haloalkoxy; R₅ is hydrogen, halogen, C₁-C₄alkyl, C₁-C₄alkoxy, C₁-C₄haloalkyl or C₁-C₄haloalkoxy; and R₆, R₇, R₈, R₉ and R₁₀ are identical or different and are each independently of the others hydrogen, C₁-C₄alkyl, C₁-C₄alkoxy, C₁-C₄haloalkyl or C₁-C₄haloalkoxy.

9. A compound of formula according to claim 8, wherein

A is A1, A2, A3, A17, A20, A21, A24, A25, A26, A27 or A31;

R₁ is C₁-C₂alkyl, C₁-C₃haloalkyl or cyclopropyl;

R₂ is hydrogen or C₁-C₃alkyl;

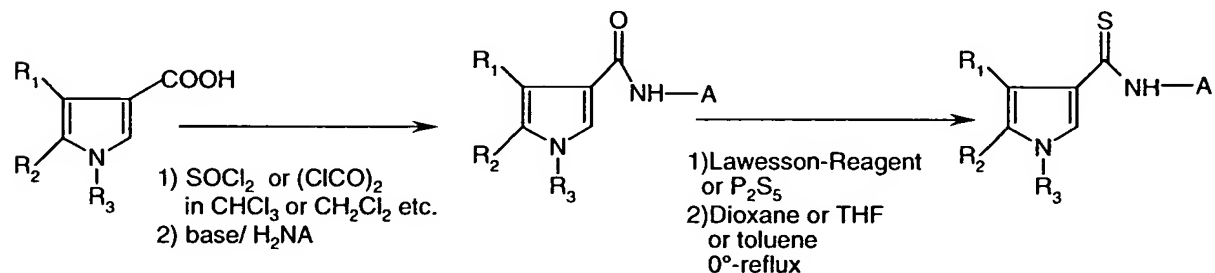
R₃ is C₁-C₃alkyl or C₁-C₃alkoxy-C₁-C₃alkyl;

R₄ is cyclohexyl, cyclohexenyl or cyclohexadienyl, which are unsubstituted or mono- to disubstituted by chloro, bromo, C₁-C₂alkyl, C₁-C₂haloalkyl or C₁-C₂haloalkoxy; thienyl, furyl, triazinyl, pyridyl, pyrazinyl, pyridazinyl or pyrimidinyl which are unsubstituted or substituted by halogen, C₁-C₄alkyl, C₁-C₄haloalkyl or C₁-C₄haloalkoxy;

R₅ is hydrogen, halogen, C₁-C₃alkyl, C₁-C₃haloalkyl, C₁-C₃alkoxy or C₁-C₃haloalkoxy; and

R₆, R₇, R₈, R₉ and R₁₀ are identical or different and are each independently of the others hydrogen or C₁-C₃alkyl.

10. A process for the preparation of compounds of formula I which comprises reacting the starting materials according to the scheme



Base = NEt₃, Hünig-base, Na₂CO₃, K₂CO₃ and others

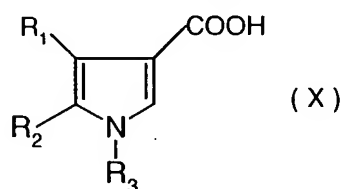
wherein A, R₁, R₂ and R₃ are as defined for formula I in claim 1.

11. A composition for controlling microorganisms and preventing attack and infestation of plants therewith, wherein the active ingredient is a compound as claimed in claim 1 together with a suitable carrier.

12. Use of a compound of formula I according to claim 1 for protecting plants against infestation by phytopathogenic microorganisms.

13. A method of controlling or preventing infestation of cultivated plants by phytopathogenic microorganisms by application of a compound of formula I as claimed in claim 1 to plants, to parts thereof or the locus thereof.

14. A pyrrole carboxylic acid of formula X



wherein R₁, R₂ and R₃ are as defined for formula I in claim 2.